

# **To clean or not to clean? A critical review of beach cleaning methods and impacts**

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## **Abstract**

Cleaning is a fundamental concern of beach managers in many destinations as well as an important requirement in beach quality awards. However, it has been largely neglected in the literature. This paper provides an overview of empirical studies on beach cleaning and analyzes cleaning-related requirements of 11 beach awards that generate controversy in the literature. This study comments on key aspects of beach cleaning, resolves various misconceptions, and provides new perspectives by integrating related topics drawn from a wide range of literature. The arguments based on both the ecological and tourism managerial perspectives are presented, indicating the gaps and proposing research solutions. The paper calls for empirical studies with regard to the efficiency of different cleaning approaches on beaches with varying levels of use intensity and for methodological designs that separate the impacts of mechanical grooming from those of trampling, dune destruction, shore armoring, artificial lighting, among others.

Keywords:

Marine litter, Pollution, Mechanical cleaning, Beach certification scheme, Eco-label, Wrack